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L1: Entry 1 of 2

File: JPAB

Feb 3, 1995

PUB-NO: JP407032821A

DOCUMENT-IDENTIFIER: JP 07032821 A

TITLE: LOW PRESSURE PNEUMATIC TIRE

PUBN-DATE: February 3, 1995

INVENTOR-INFORMATION:

NAME

COUNTRY

ARIMURA, KAGEYUKI

ASSIGNEE-INFORMATION:

NAME

COUNTRY

OHTSU TIRE & RUBBER CO LTD :THE

APPL-NO: JP05181591

APPL-DATE: July 22, 1993

INT-CL (IPC): B60 C 11/11; B60 B 15/02

ABSTRACT:

PURPOSE: To improve the soil-expelling performance and steering stability, decrease the vibrations, and ensure the tractive force.

CONSTITUTION: In a low pressure punematic tire comprising a large number of lugs 10 disposed on the outer periperal surface of a tread 2 in such a manner as to be alternately located on both sides of a tread center and circumferentially at equal space intervals, the lug 10 having bent portions which are circumferentially bent, comprises a first bent portion 13 and a second bent portion 14, the first bent portion 13 being located near the tread center while, on the other hand, the portion of the lug between the first and second bent portions 13, 14 is made to be a center lug parallel portion 10A substantially perpendicular to a tread center line L. Accordingly, the opposite side to the lug parallel portion 10A is made to be a center lug inclined portion 10B inclined in the direction F of the tire rotation and the outside of the lug as veiwed axially from the second bent portion 14 is inclined with respect to the tread center line L and made to be a side jug inclined portion 10C. Further, the portion extending from the first bent portion 13 in the direction F of the tire rotation is made to be an anti-vibration portion 10D.

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L1: Entry 2 of 2

File: DWPI

Feb 3, 1995

DERWENT-ACC-NO: 1995-110236
DERWENT-WEEK: 200206
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TITLE: Low-pressure pneumatic tyre - has number of lugs provided on outer periphery of tread

PATENT-ASSIGNEE:

ASSIGNEE

OHTSU TIRE & RUBBER CO LTD

CODE

OHTS

PRIORITY-DATA: 1993JP-0181591 (July 22, 1993)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
<u>JP 07032821 A</u>	February 3, 1995		004	B60C011/11
JP 3243338 B2	January 7, 2002		004	B60C011/11

APPLICATION-DATA:

PUB-NO	APPL-DATE	APPL-NO	DESCRIPTOR
JP 07032821A	July 22, 1993	1993JP-0181591	
JP 3243338B2	July 22, 1993	1993JP-0181591	
JP 3243338B2		JP 7032821	Previous Publ.

INT-CL (IPC): B60 B 15/02; B60 C 11/11

ABSTRACTED-PUB-NO: JP 07032821A

BASIC-ABSTRACT:

The tyre comprises a number of lugs provided on the outer periphery of a tread, at both sides of the tread centre, at equal spaces in the peripheral direction with curved portions curved to the peripheral direction.

The lug has two curved portions each, the first curved portion being located near a tread centre, the centre parallel portion being formed between the 1st and 2nd curved portions to be almost perpendicular to a tread centre line, a side slant portion being provided at the outside end of the 2nd curved portion and a vibration preventive portion being extended from the 1st curved portion to a tyre rotating direction.

ADVANTAGE - Sufficient traction is kept at the centre parallel portions of the lugs and the deposition of mud is prevented.

CHOSEN-DRAWING: Dwg.1/7

TITLE-TERMS: LOW PRESSURE PNEUMATIC TYRE NUMBER LUG OUTER PERIPHERAL TREAD

DERWENT-CLASS: A95 Q11

CPI-CODES: A12-T01B;

ENHANCED-POLYMER-INDEXING:

Polymer Index [1.1] 017 ; H0124*R Polymer Index [1.2] 017 ; ND01 ; Q9999 Q9256*R Q9212
; K9416

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1995-050316

Non-CPI Secondary Accession Numbers: N1995-086946

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(11)特許出願公開番号

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(43)公開日 平成7年(1995)2月3日

(51)Int.Cl.⁶

識別記号

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技術表示箇所

B 6 0 C 11/11

B 6 0 B 15/02

P

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8408-3D

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(21)出願番号 特願平5-181591

(22)出願日 平成5年(1993)7月22日

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オーツタイヤ株式会社

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大阪府和泉市和気町2-8-8

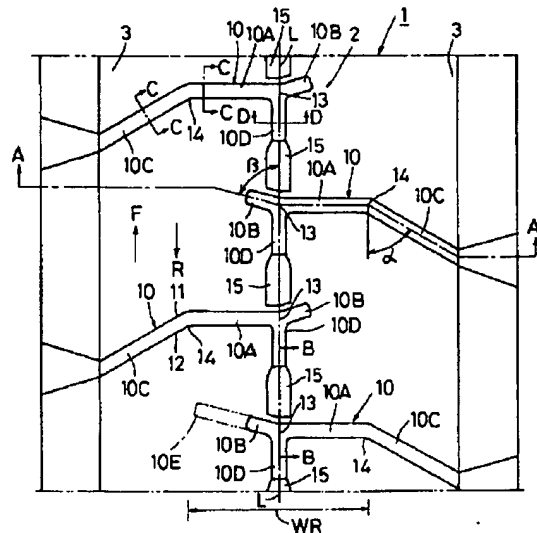
(74)代理人 弁理士 安田 敏雄

(54)【発明の名称】 低圧空気入りタイヤ

(57)【要約】

【目的】 排土性能及び操縦安定性の向上、振動の減少、牽引力の確保を図る。

【構成】 トレッド2外周面にトレッドセンタの両側でかつ周方向等間隔に多数のラグ10を交互に配設し、各ラグ10に周方向へ屈曲する屈曲部を備えている低圧空気入りタイヤ1であって、各ラグ10は夫々第1屈曲部13及び第2屈曲部14を備え、第1屈曲部13をトレッドセンタの近傍に位置させ、第1屈曲部13と第2屈曲部14との間をトレッドセンタラインLと略直角な中央ラグ平行部10Aとし、該ラグ平行部10Aの反対側はタイヤ回転方向Fに傾斜する中央ラグ傾斜部10Bとし、第2屈曲部14から幅方向外側をトレッドセンタラインLに対して傾斜して側部ラグ傾斜部10Cとし、さらに第1屈曲部13からタイヤ回転方向Fに延びる振動防止部10Dを設ける。



【特許請求の範囲】

【請求項1】トレッド外周面にトレッドセンタの両側でかつ周方向等間隔に多数のラグを交互に配設し、各ラグに周方向へ屈曲する屈曲部を備えている低圧空気入りタイヤにおいて、

前記各ラグは夫々2つの屈曲部を備え、第1屈曲部をトレッドセンタの近傍に位置させ、第1屈曲部と第2屈曲部の間をトレッドセンタラインと略直角な中央ラグ平行部とし、第2屈曲部から幅方向外端側をトレッドセンタラインに対して傾斜して側部ラグ傾斜部とし、第1屈曲部からタイヤ回転方向に延びる振動防止部を設けたことを特徴とする低圧空気入りタイヤ。

【請求項2】前記各ラグの第1屈曲部から中央ラグ平行部の反対側にタイヤ回転方向に傾斜する中央ラグ傾斜部を設けたことを特徴とする請求項1の低圧空気入りタイヤ。

【発明の詳細な説明】

【0001】

【産業上の利用分野】本発明は、バギー車、農機等に利用される不整地走行に適した低圧空気入りタイヤに関するものである。

【0002】

【従来の技術】従来、この種タイヤとして、図6、図7に例示するものが知られている（特公平4-50201号公報参照）。このタイヤTは、中央部に位置するトレッド21がショルダ22を介して両サイドウォール23へトロイダル状に連なり、断面台形状を呈しかつトレッド幅方向に延びる多数のラグ24が、前記トレッド21及び両ショルダ22の外表面に、タイヤ周方向に間隔をもって配設されている。

【0003】前記ラグ24は、左右交互に配された中央ラグ要素24Aと、側部長ラグ要素24B及び側部短ラグ要素24Cから成り、トレッドセンタラインL上の重合部分において、平面視でタイヤ回転方向FにV字状になるように、45〜70度の角度で傾斜して振分けられている第1屈曲部25と、左右のショルダ22近傍で左右対称位置において平面視で反タイヤ回転方向RにV字状になるように傾斜して振分けられている第2屈曲部26を備え、中央ラグ要素24Aと側部長・短ラグ要素24B、24C間に排土部27、28が形成されている。

【0004】

【発明が解決しようとする課題】上記従来技術では、コード入り又はコードレスのいずれのタイヤにおいても、ラグ24がトレッドセンタラインLに対し45〜70°の角度をもって傾斜し、かつ第2屈曲部26を有するので排土が不十分であり、タイヤのフラツキによる振動が大きいという問題がある。

【0005】本発明は、上述のような実状に鑑みてなされたもので、その目的とするところは、排土性能及び操縦安定性の向上、振動の減少を図りうる低圧空気入りタ

イヤを提供するにある。

【0006】

【課題を解決するための手段】本発明では、上記目的を達成するために、次の技術的手段を講じた。即ち、本発明は、トレッド外周面にトレッドセンタの両側でかつ周方向等間隔に多数のラグを交互に配設し、各ラグに周方向へ屈曲する屈曲部を備えている低圧空気入りタイヤにおいて、前記各ラグは夫々2つの屈曲部を備え、第1屈曲部をトレッドセンタの近傍に位置させ、第1屈曲部と第2屈曲部の間をトレッドセンタラインと略直角な中央ラグ平行部とし、第2屈曲部から幅方向外端側をトレッドセンタラインに対して傾斜して側部ラグ傾斜部とし、第1屈曲部からタイヤ回転方向に延びる振動防止部を設けたことを特徴としている。

【0007】また、本発明は、前記各ラグの第1屈曲部から中央ラグ平行部の反対側にタイヤ回転方向に傾斜する中央ラグ傾斜部を設けたことを特徴としている。

【0008】

【作用】本発明によれば、タイヤの前進回転によって、常時2〜3個のラグが接地し、各ラグの第1及び第2屈曲部間の中央ラグ平行部で路面をけり、大きな牽引力を発揮する。そして、タイヤ内圧が低い場合、接地時と反接地時でトレッド部の動きが大きく、この作用により泥土が容易に落ち、各ラグのショルダに近い動きが少ない側部ラグ傾斜部は、中央ラグ平行部に対して傾斜しているので、泥土の排出が良好に行われる。

【0009】また、トレッドセンタの振動防止部と前記側部ラグ傾斜部との共働によって、タイヤのフラツキ及び振動が防止され、良好な作業能力を発揮し、操縦安定性が良くなる。さらに、各ラグの第1屈曲部から延びる中央ラグ傾斜部を設けかつ適当に長くすることによって、タイヤの振動が大幅に減少する。

【0010】

【実施例】以下、本発明の実施例を図面に基づき説明する。図1〜図4は本発明の実施例を示し、タイヤ1はゴムその他の弾性材料から成り、必要に応じて補強コードが周方向に埋入され、外周の中央部に位置するトレッド2がショルダ3を介して両サイドウォール4へトロイダル状に連なっている。

【0011】前記サイドウォール4は、径内方向に延びてビード部5を有し、各ビード部5にはビード6が埋設されている。なお、補強コード（例えばボディアライ）を埋入する場合は、該コードの両端がビード6の内側から外側に巻かれ、該コードによってビード6が互いに連結される。そして、各ビード部5は、車輪7のリム8に嵌合され、バルブ手段9によって、0.15kgf/cm²前後（0.4kgf/cm²以下）の低圧のタイヤ内圧が封入されている。

【0012】トレッド2と両ショルダ3の外周面には、ラグ10が周方向に所定間隔でかつトレッドセンタライ

ンLの両側に交互に配設され、該ラグ10は図4に示すように、蹴面部11と反蹴面部12とにより断面台形とされ、トレッドセンタの近傍(真上を含む)に第1屈曲部13が、トレッド2のセンタとショルダ3との中間部分に第2屈曲部14が夫々設けられている。

【0013】そして、ラグ10は、第1屈曲部13と第2屈曲部14の間が、トレッドセンタラインLと略直角に延びかつ相互に略平行な中央ラグ平行部10Aとされ、第1屈曲部13の該ラグ平行部10Aの反対側が、トレッドセンタラインLに対して約 75° の角度 β でしかもタイヤ回転方向Fに傾斜する中央ラグ傾斜部10Bとされ、第2屈曲部14から幅方向外端側が、トレッドセンタラインLに対して $45\sim 70^\circ$ の角度 α でタイヤ回転方向と逆方向Rに傾斜する側部ラグ傾斜部10Cとされている。

【0014】さらに、ラグ10の第1屈曲部13からタイヤ回転方向後方に、振動防止部10Dが設けられ、該振動防止部10Dとタイヤ回転方向後方側の隣接第1屈曲部13との間には、ラグ10の高さの約半分の高さの排土部15が設けられている(図3参照)。なお、ラグパターン上に占める中央ラグ平行部10Aの範囲WRは、全トレッド幅WTの $30\sim 60\%$ とするのが好ましい。即ち、中央ラグ平行部10Aの範囲WRは、 30% 未満では牽引力が小さく、 60% を超えると牽引力が強過ぎて泥土の付着が多くなるからである。

【0015】そして、前記ラグ10は、所定荷重(例えば 50kg)負荷時において、常に2~3個が接地するように設計されており、タイヤ1が左右(軸方向)に傾かないようになっている。また、前記振動防止部10Dは、タイヤ回転方向前側に連設することにより、振動防止効果を発揮するが、蹴面部11に凹凸が形成されることになるため、泥土の付着が多くなり牽引力が低下するので好ましくない。

【0016】上記実施例によれば、常に2~3個のラグ10が接地し、中央ラグ平行部10A及び中央ラグ傾斜部10Bを備えているので、十分な牽引力を確保することができ、良好な作業能力を保持できるうえ、中央ラグ平行部10Aの範囲WR内のトレッド2が、タイヤ内圧が低い($0.4\text{kgf}/\text{cm}^2$ 以下)ので、接地時と反接地時での動きが大きく、したがって、泥土の付着が少なく、仮に付着しても容易に剥離する。

【0017】また、タイヤ1の接地時と反接地時で動きの少ないショルダ3及びこれに近い部分は、側部ラグ傾斜部10Cであるから、泥土の排出が良好で、しかも、振動防止部10Dと前記傾斜部10Cが同時に接地するうえ、常に2~3個のラグ10が接地するため、左右のフラツキが生起せず、大幅に振動を減少することができる。したがって、操縦安定性が向上する。

【0018】上記実施例において、各ラグ10の中央ラグ傾斜部10Bを、図1に2点鎖線10Eで示すよう

に、中央ラグ平行部10Aの範囲WR内で可及的に長くすることにより、振動をさらに減少することができる。本発明は、上記実施例に限定されるものではなく、適宜設計変更することができる。例えば、タイヤ回転方向は前後逆であっても良く、側部ラグ傾斜部10Cをタイヤ回転方向Fに傾斜させたり、中央ラグ傾斜部10Bを逆方向Rに傾斜させたり、振動防止部10Dをタイヤ回転方向Fに延ばしたりしても良い。

【0019】

【発明の効果】本発明は、上述のように、トレッド外周面にトレッドセンタの両側でかつ周方向等間隔に多数のラグを交互に配設し、各ラグに周方向へ屈曲する屈曲部を備えている低圧空気入りタイヤにおいて、前記各ラグは夫々2つの屈曲部を備え、第1屈曲部をトレッドセンタの近傍に位置させ、第1屈曲部と第2屈曲部の間をトレッドセンタラインと略直角な中央ラグ平行部とし、第2屈曲部から幅方向外端側をトレッドセンタラインに対して傾斜して側部ラグ傾斜部とし、第1屈曲部からタイヤ回転方向に延びる振動防止部を設けたことを特徴とするものであるから、中央ラグ平行部によって十分な牽引力を確保でき、かつ泥土付着を防止でき、良好な作業能力を保持でき、側部ラグ傾斜部によって排土を良好にしようと共に振動防止部との共働によりフラツキを防止して大幅に振動を減少し、操縦の安定性を向上することができる。

【0020】また、本発明は、前記各ラグの第1屈曲部から中央ラグ平行部の反対側にタイヤ回転方向に傾斜する中央ラグ傾斜部を設けたことを特徴とするものであるから、牽引力をより強力にしようと共に、振動をさらに減少することが可能である。

【図面の簡単な説明】

【図1】本発明実施例のラグパターンを示す要部の平面図である。

【図2】図1のA-A線に沿うタイヤ断面図である。

【図3】図1のB-B線に沿う断面図である。

【図4】図1のC-C線に沿う断面図である。

【図5】図1のD-D線に沿う断面図である。

【図6】従来例のラグパターンを示す要部の平面図である。

【図7】図6のE-E線に沿うタイヤ断面図である。

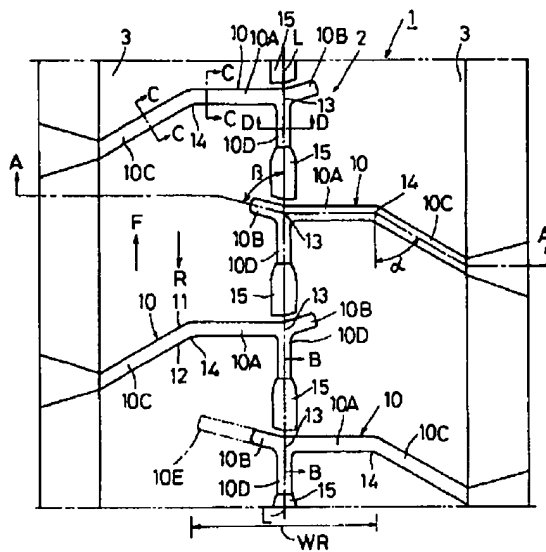
【符号の説明】

- | | |
|-----|---------|
| 1 | タイヤ |
| 2 | トレッド |
| 10 | ラグ |
| 10A | 中央ラグ平行部 |
| 10B | 中央ラグ傾斜部 |
| 10C | 側部ラグ傾斜部 |
| 10D | 振動防止部 |
| 13 | 第1屈曲部 |
| 14 | 第2屈曲部 |

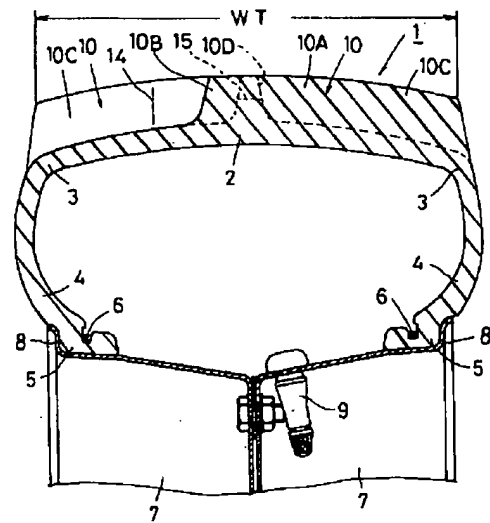
5
F タイヤ回転方向
L トレッドセンタライン

6
R タイヤ回転逆方向

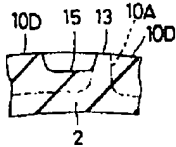
【図1】



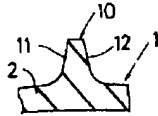
【図2】



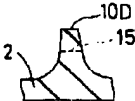
【図3】



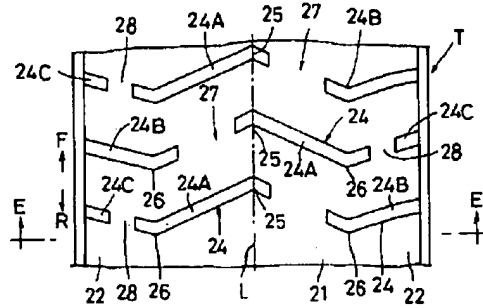
【図4】



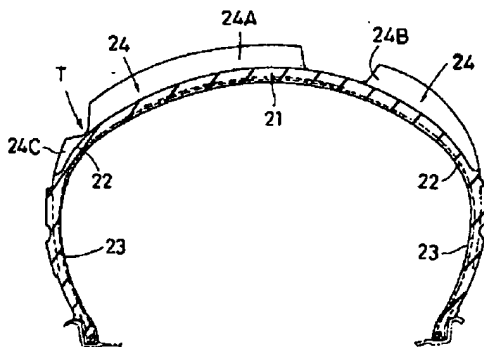
【図5】



【図6】



【図7】



* NOTICES *

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Industrial Application] this invention relates to the low voltage pneumatic tire suitable for the irregular ground run used for a buggy, a ** machine, etc.

[0002]

[Description of the Prior Art] Conventionally, what is illustrated to drawing 6 and drawing 7 is known as this seed tire (refer to JP,4-50201,B). The lug 24 of a large number which the tread 21 located in a center section stands in a row in the shape of toroidal one to both the sidewalls 23 through a shoulder 22, and present a cross-section trapezoidal shape, and are prolonged crosswise [tread] has an interval in the outside surface of the aforementioned tread 21 and both the shoulders 22 at a tire hoop direction, and this tire T is arranged.

[0003] The aforementioned lug 24 consists of central lug element 24A allotted alternately with right and left, and flank chief lug element 24B and flank short lug element 24C, and is set into the polymerization portion on the tread center line L. The 1st flection 25 which has been inclined and distributed at the angle of 45 - 70 degrees so that it may become V character-like by plane view at the tire hand of cut F, It has the 2nd flection 26 which has been inclined and distributed so that it may become the anti-tire hand of cut R V character-like by plane view in a bilateral-symmetry position on about 22 shoulder on either side, and the earth removal sections 27 and 28 are formed between central lug element 24A, the flank chief and short lug element 24B, and 24C.

[0004]

[Problem(s) to be Solved by the Invention] There is a problem that the above-mentioned conventional technology of earth removal is inadequate since a lug 24 inclines with the angle of 45-70 degrees to the tread center line L and it has the 2nd flection 26 also in entering a code or which a cordless tire, and vibration by FURATSUKI of a tire is large.

[0005] this invention was made in view of the above actual condition, and the place made into the purpose is to offer the low voltage pneumatic tire which can aim at improvement in an earth removal performance and driving stability, and reduction of vibration.

[0006]

[Means for Solving the Problem] In this invention, in order to attain the above-mentioned purpose, the following technical means were provided. Namely, this inventions are the both sides of a tread center, and arrange many lugs in a tread peripheral face by turns at hoop-direction regular intervals, and set them to a low voltage pneumatic tire equipped with the flection crooked to a hoop direction in each lug. Each aforementioned lug is equipped with two flections, respectively, and locates the 1st flection near the tread center. between the 1st flection and the 2nd flection -- the tread center line and abbreviation -- it considers as a right-angled central lug parallel part, and a crosswise outer edge side is inclined from the 2nd flection to the tread center line, and it considers as a flank lug ramp, and is characterized by preparing the vibration isolation section prolonged in a tire hand of cut from the 1st flection

[0007] Moreover, this invention is characterized by preparing the central lug ramp which inclines in a tire hand of cut at the opposite side of a central lug parallel part from the 1st flection of each aforementioned lug.

[0008]

[Function] according to this invention -- advance rotation of a tire -- 2-3 lugs of always -- grounding -- the [of each lug / the 1st and] -- a road surface is kicked by the central lug parallel part between 2 flections, and big attraction is demonstrated And since the movement of the tread section has large tire internal pressure at the time of grounding and anti-grounding for a low reason, mud falls easily by this operation and the flank lug ramp with little movement near the shoulder of each lug inclines to a central lug parallel part, eccrisis of mud is performed good.

[0009] Moreover, by having two incomes with the vibration isolation section of a tread center, and the aforementioned flank lug ramp, FURATSUKI of a tire and vibration are prevented, good work performance is demonstrated, and driving stability becomes good. Furthermore, vibration of a tire decreases sharply by preparing the central lug ramp prolonged from the 1st flection of each lug, and lengthening suitably.

[0010]

[Example] Hereafter, the example of this invention is explained based on a drawing. Drawing 1 - drawing 4 show the example of this invention, a tire 1 consists of the spring material of rubber and others, a reinforcement code is embedded at a hoop direction if needed, and the tread 2 located in the center section of the periphery stands in a row in the shape of toroidal one to both the

sidewalls 4 through the shoulder 3.

[0011] The aforementioned sidewall 4 is prolonged in path inboard, it has the bead section 5, and the bead 6 is laid under each bead section 5. In addition, when embedding a reinforcement code (for example, body ply), the ends of this code are rolled outside from the inside of a bead 6, and the bead 6 of each other is connected in this code. And each bead section 5 fits into the rim 8 of a wheel 7, and is 0.15 kgf/cm² by the bulb means 9. The low-pressure tire internal pressure of order (below 0.4 kgf/cm²) is enclosed.

[0012] By a lug's 10 being a predetermined interval at a hoop direction, and being arranged by turns in the both sides of the tread center line L by the peripheral face of a tread 2 and both the shoulders 3, as this lug 10 is shown in drawing 4, ***** 11 and anti-***** 12 consider as a cross-section trapezoid, the 1st flection 13 is formed near the tread center (right above is included), and the 2nd flection 14 is formed in the interstitial segment of the center of a tread 2, and a shoulder 3, respectively.

[0013] It is referred to as parallel central lug parallel part 10A. and the lug 10 -- between the 1st flection 13 and the 2nd flection 14 -- the tread center line L and an abbreviation right angle -- being prolonged -- and mutual -- abbreviation -- The opposite side of this lug parallel part 10A of the 1st flection 13 is set to central lug ramp 10B which moreover inclines in the tire hand of cut F at the angle beta of about 75 degrees to the tread center line L. It is referred to as flank lug ramp 10C toward which a crosswise outer edge side inclines from the 2nd flection 14 to a tire hand of cut and an opposite direction R at the angle alpha of 45-70 degrees to the tread center line L.

[0014] Furthermore, vibration isolation section 10D is prepared in tire hand-of-cut back from the 1st flection 13 of a lug 10, and the earth removal section 15 of the height of the abbreviation half of the height of a lug 10 is formed between this vibration isolation section 10D and the 1st flection 13 of contiguity by the side of tire hand-of-cut back (refer to drawing 3). In addition, as for the range WR of central lug parallel part 10A occupied on a lug pattern, it is desirable to carry out to 30 - 60% of the total tread width of face WT. That is, the range WR of central lug parallel part 10A is because attraction will be too strong and adhesion of mud will increase at less than 30%, if attraction is small and exceeds 60%.

[0015] And the aforementioned lug 10 is designed so that 2-3 pieces may always ground at the time of a predetermined load (for example, 50kg) load, and a tire 1 inclines to right and left (shaft orientations). Moreover, although the aforementioned vibration isolation section 10D demonstrates the vibration isolation effect by forming successively to a tire hand-of-cut anterior, since irregularity will be formed in ***** 11, adhesion of mud increases and attraction declines, it is not desirable.

[0016] Since according to the above-mentioned example 2-3 lugs 10 always grounded and it has central lug parallel part 10A and central lug ramp 10B In being able to secure sufficient attraction and being able to hold good work performance, tire internal pressure by the low's (below 0.4 kgf/cm²) [the tread 2 within the range WR of central lug parallel part 10A] Even if the movement in the time of grounding and anti-grounding is large, therefore there is little adhesion of mud and it adheres, it will exfoliate easily.

[0017] Moreover, since the portion near a shoulder 3 and this with little movement is flank lug ramp 10C in the time of grounding of a tire 1, and anti-grounding, eccrisis of mud is good, in vibration isolation section 10D and the aforementioned ramp 10C grounding simultaneously, since 2-3 lugs 10 always ground, FURATSUKI on either side does not occur but vibration can be decreased sharply. Therefore, driving stability improves.

[0018] In the above-mentioned example, vibration can be further decreased by lengthening central lug ramp 10B of each lug 10 as much as possible within the range WR of central lug parallel part 10A at drawing 1, as two-dot chain line 10E shows. this invention is not limited to the above-mentioned example, and can carry out a design change suitably. For example, a tire hand of cut may be reverse approximately, and flank lug ramp 10C may be made to incline in the tire hand of cut F, or you may extend central lug ramp 10B to an opposite direction R, and it may extend ***** and vibration isolation section 10D to the tire hand of cut F.

[0019]

[Effect of the Invention] In a low voltage pneumatic tire equipped with the flection which this inventions are the both sides of a tread center, and arrange many lugs in a tread peripheral face by turns as mentioned above at hoop-direction regular intervals, and is crooked to a hoop direction in each lug Each aforementioned lug is equipped with two flections, respectively, and locates the 1st flection near the tread center. It considers as a right-angled central lug parallel part. between the 1st flection and the 2nd flection -- the tread center line and abbreviation -- Incline a crosswise outer edge side from the 2nd flection to the tread center line, and it considers as a flank lug ramp. Since it is characterized by preparing the vibration isolation section prolonged in a tire hand of cut from the 1st flection While being able to secure sufficient attraction by the central lug parallel part, and being able to prevent mud adhesion, being able to hold good work performance and being able to make earth removal good by the flank lug ramp, FURATSUKI can be prevented by having two incomes with the vibration isolation section, vibration can be decreased sharply, and the stability of operation can be improved.

[0020] Moreover, it can be further decreased in vibration while it can make attraction more powerful, since this invention is characterized by preparing the central lug ramp which inclines in a tire hand of cut at the opposite side of a central lug parallel part from the 1st flection of each aforementioned lug.

[Translation done.]